
Subject: Passive radiator flanking sub/woofer.
Posted by [jonone](#) on Tue, 23 Apr 2019 18:56:46 GMT
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Hi haven't been on the forum for a while....

This is a question kind of for Wayne if you don't mind answering. But anyone is free to give the opinion.

At the moment I'm using a 2 way speaker with stereo subs below and overlapping the crossover up to 150hz.

Not a true flanking sub approach as the room doesn't allow for the subs to be placed away from directly below the speakers.

I do have the subs turned 180degrees so there facing the rear walls to act like a woofer in a different place.

My question is.

Do you recommend subs with passive radiators or is it best to stick to sealed subs? (or ported) Also my second question is, if a flanking sub has its driver facing forward but a passive radiator facing the rear wall will this act the same as facing a normal driver towards a wall and help the transitional area if crossed high enough? Acting like having a woofer in a different space.

Thanks in advance for the help.

Hope your well.

Jon

Subject: Re: Passive radiator flanking sub/woofer.
Posted by [Wayne Parham](#) on Wed, 24 Apr 2019 15:46:57 GMT
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The only special requirement of a flanking sub is that it be able to reproduce quality sound up to 200Hz or so. Traditionally, subwoofers are only used below 100Hz but flanking subs are used nearly an octave higher than that.

Subject: Re: Passive radiator flanking sub/woofer.
Posted by [johnnycamp5](#) on Mon, 29 Apr 2019 13:59:48 GMT
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Hello.

I have experience with one brand of passive radiator sub-

Many years ago I started with one, and then built another (passive radiator) sub, for flanking 4pi mains.

They were a 12" Scan-speak diy kit. I'm recalling the suggested enclosure was roughly 3 cubic

feet.

In my room, (and to my ears) they did not blend well at all, especially if I tried to cross them over higher than around 70-80Hz, no matter the position or phase. Above that frequency they became very "muddy" sounding.

In fact, they sounded their best when set at 50Hz low pass, which is to say they would not "blend" with the mains at all.

There was a small metal (weight) attached to the back of the passive radiator woofer, where the magnet structure would normally be.

I did not play with different weights, which supposedly can change the "tune" of the sub and how it performs, so I may have been able to improve them.

Never feeling satisfied, I switched to 3pi subs to give Waynes design (ported, pro sub) a try. They blended without any effort at all, right to 200Hz if I chose to go that high...which I did not need to. Using a Crown rack amp, I settled on 150Hz.

These were the only two brands of sub-woofer I tried for flanking my mains.

The Scan-speak kits may have had a touch more output at the bottom octave (20-40Hz) but I believe they had a 4db boost @25Hz. designed into the kits plate amp, a feature I believe is useless for music anyway...

You might say they were a better HT sub, but if you haven't gotten the mid-bass right (50-150Hz?) what good is it?

I took almost no measurements with all this, so its just my personal (subjective) experience over the last six years of experimentation.

YMMV.
